



Central Contra Costa Sanitary District

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JOYCE E. MURPHY
Secretary of the District

July 28, 1997

Dear Ms. Hansel:

1997 CATEGORY III RFP

Enclosed are 10 copies of a Proposal for the 1997 Category III Ecosystem Restoration Projects and Programs.

We look forward to working on this exciting project and we appreciate your consideration of the enclosed proposal.

If you have any questions about the proposal, please give me a call at 510/229-7361.

Sincerely,

Barton L. Brandenburg
Pollution Prevention Superintendent

BLB/lw

Enclosures

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DWR WAREHOUSE

Section I: Executive Summary

Title: IPM Partnership to Improve Water Quality in Suisun Bay and Local Creeks
Applicant: Central Contra Costa Sanitary District (CCCSD)

Project Description and Primary Biological/Ecological Objectives:

The proposed project seeks to reduce the presence of toxic pesticides in Suisun Bay and local creeks in central Contra Costa County through a broad-based community effort to increase the use of Integrated Pest Management (IPM) and expand awareness of the water quality impacts of pesticide misuse. IPM is a pest-management strategy which emphasizes non-chemical methods to keep pests at acceptably low levels.

The project expands a pilot project, now underway, to form partnerships with stores and with Master Gardeners to promote IPM. In addition, it would promote IPM through videos, publicity about IPM demonstration gardens, public agency IPM use, and an "eco-friendly" yard campaign. By reducing pesticide use, the project will improve water quality and aquatic habitat. Project materials will be made available to interested agencies throughout the Bay/Delta watershed for broader implementation.

Approach/Tasks/Schedule:

The project builds on an existing pilot project and uses existing vehicles (such as trained Master Gardeners) and store employees as a cost-effective, credible way to disseminate information. The project uses strategies designed to change behavior—not just raise awareness—by addressing barriers to using IPM (lack of products and practical information) and by changing community norms. It employs strategies drafted by the Bay Area Urban Pesticide Committee to address the environmental threat from pesticides. The following tasks are proposed:

1. Manage the project. This task includes coordinating/sharing with other agencies.
2. Work with additional stores/nurseries so they provide IPM information and products.
3. Expand the partnership with Master Gardeners to help them be an IPM resource.
4. Purchase and distribute a video about IPM.
5. Publicize IPM strategies used by existing public gardens.
6. Help change community norms through an "eco-friendly" yard campaign.
7. Train Pest Control Operators (PCOs) on IPM techniques.
8. Evaluate results, as summarized under "monitoring and data evaluation."

Tasks 1 through 5 and 8 will begin when the contract is signed and continue for three years. Tasks 6 and 7 will begin later, as shown on the schedule chart in the proposal body.

Justification for Project and Funding by CALFED:

CCCSD became aware of the need to reduce toxic pesticides entering the sewer system when it discovered that organophosphate pesticides (diazinon and chlorpyrifos) in its treated wastewater were killing the test organism *Ceriodaphnia dubia*. Other research has shown that diazinon is found in creeks throughout the Bay area, and during storm events, concentrations are often high enough to be toxic to some species of aquatic life. Similarly, urban creeks monitored in the Central Valley consistently show diazinon and chlorpyrifos levels that exceed Hazards Assessment criteria set by the Department of Fish and Game.

The Bay Area Urban Pesticide Committee, comprised of key stakeholders, concluded that the environmental threat from pesticide use warrants a widespread public outreach program, and drafted a pesticide education strategy. This proposal implements some of those strategies within central Contra Costa County. It will improve water quality in local creeks and in Suisun Bay, the discharge point for CCCSD's treated wastewater and, along with local creeks, the receiving water for central Contra Costa County's stormwater runoff.

Suisun Bay is a tidal perennial aquatic habitat and includes saline emergent wetlands habitat, priority habitats identified by the CALFED Bay-Delta program. The urban creeks provide instream aquatic habitat. The proposal addresses water quality, an identified stressor of the priority habitats and species. Diazinon and chlorpyrifos are listed as constituents of concern by the CALFED Water Quality Group.

Budget Costs and Third Party Impacts:

The total project cost is \$457,000, of which \$266,000 is requested from the CALFED Bay-Delta program. Because the project seeks to change pesticide use, it may affect the manufacturers/suppliers of pest-control products.

Applicant Qualifications:

CCCSD, the applicant and project lead, is a regional leader in pollution prevention, research, and public education. Project manager Bart Brandenburg, CCCSD's Pollution Prevention Superintendent, and assistant project managers Earlene Millier and Tim Tullis, have excellent track records in implementing grant-funded projects, including the pilot project on which this project builds.

This project will be implemented in cooperation with the University of California Cooperative Extension Master Gardeners and the Contra Costa Clean Water Program. Coordination will occur with additional agencies through the Urban Pesticide Committee and other forums. In addition, the project team includes IPM experts: The Bio-Integral Resource Center (BIRC) and Baefsky & Associates. It also includes Janet Cox and Associates and her sub-consultant Tucker and Associates, consultants with extensive experience in pollution-prevention education.

Monitoring and Data Evaluation:

CCCSD proposes to undertake the following monitoring/project evaluation steps:

1. Prepare quarterly reports to describe progress during the grant.
2. Track project participation (such as how many Master Gardeners were trained).
3. Request feedback from participants (such as through workshop evaluation forms).
4. Collect pesticide sales information from participating stores.
5. Measure public awareness through a follow-up survey to a 1994 baseline survey.
6. Continue to periodically evaluate the toxicity of its effluent and the presence of diazinon and chlorpyrifos in its influent and effluent.

Local Support/Coordination/Compatibility with CALFED objectives:

The project implements significant elements of the Urban Pesticide Committee's draft pesticide education strategy. Throughout the grant, CCCSD will coordinate with that committee as well as other groups (see page 7). The project supports the CALFED water quality objective and does not foreclose any CALFED restoration options.

Section II: Title Page

Title: IPM Partnership to Improve Water Quality in Suisun Bay and Local Creeks

Applicant: Central Contra Costa Sanitary District (CCCSD)
Project Manager: Bart Brandenburg, Pollution Prevention Superintendent
Address: 5019 Imhoff Place, Martinez, CA 94553
Phone: (510) 228-8500
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E-mail: BBranden@centralsan.dst.ca.us

Type of Organization and Tax Status:
Special District--CALFED category "Federal agencies and other public entities".
Tax exempt.

Tax Identification Number:
N/A

Technical and Financial Contact Person:
Bart Brandenburg (address, etc. provided above)

Participants/Collaborators in Implementation:
University of California Cooperative Extension Master Gardeners
Contra Costa Clean Water Program
The Bio-Integral Resource Center (BIRC)
Baefsky & Associates
Janet Cox and Associates and sub-consultant Tucker and Associates

RFP Project Group Type:
Group III, Services (Educational)

Section III: Project Description

Project Description and Approach

The proposed project seeks to reduce the presence of toxic pesticides in Suisun Bay and local creeks in central Contra Costa County through a broad-based community effort to increase the use of Integrated Pest Management (IPM). IPM emphasizes physical, mechanical, horticultural, and biological tactics to keep pest numbers low enough to prevent intolerable damage or annoyance. Chemical controls are used as a last resort, and if used, the least toxic one is chosen. The project team will explain the water quality harm from pesticides when promoting IPM.

The project uses strategies and messages consistent with those drafted by the Urban Pesticide Committee. It's designed to be cost-effective and build on a pilot project now underway to form partnerships with stores and with Master Gardeners to promote IPM. In addition, the project promotes the use of IPM through training videos, publicity about demonstration gardens, an "eco-friendly yard" campaign, and the establishment of a local public agency as a model for IPM. Its elements will be shared with other agencies for broader implementation.

Location and/or Geographic Boundaries of Project

The project targets central Contra Costa County, CCCSD's service area, shown on Figure 1. Reducing toxic pesticide use within the project area benefits water quality in local creeks and Suisun Bay. The project materials will be available to interested agencies throughout the Bay/Delta watershed.

Expected Benefits

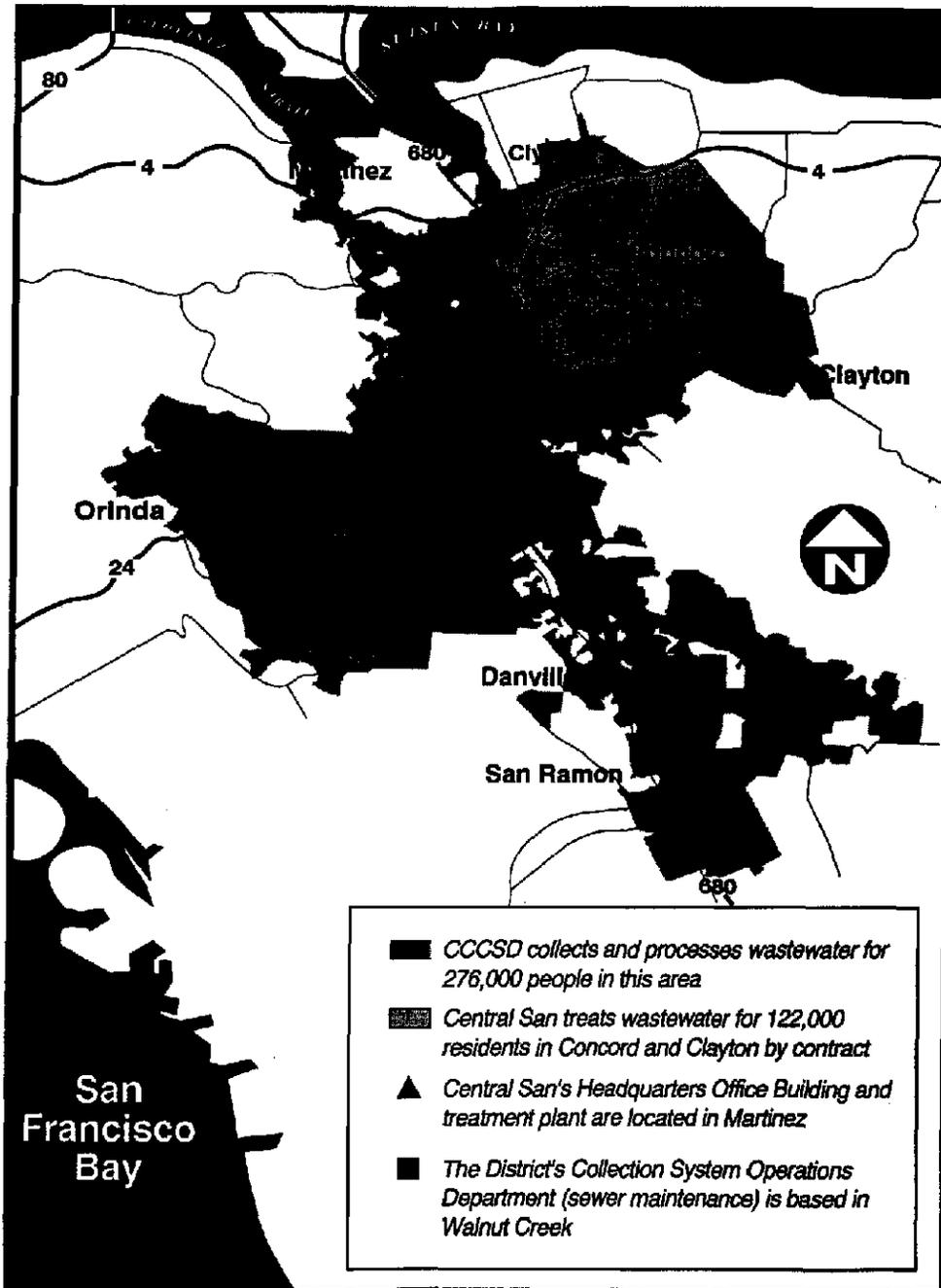
The project is expected to reduce urban inputs of toxic pesticides to Suisun Bay and local creeks within central Contra Costa County. Suisun Bay is a tidal perennial aquatic habitat and includes saline emergent wetlands habitat, priority habitats identified by the CALFED Bay-Delta program. As described in the RFP Appendix B, tidal perennial aquatic habitats potentially benefit a number of species, including Delta smelt; salmon; and wildlife and plant species in the shorebird and plant-wading bird guild, waterfowl guild, and the freshwater emergent wetlands plant association. Key species for saline emergent wetlands include the Salt marsh harvest mouse and the Suisun song sparrow. The urban creeks provide instream aquatic habitat, for a variety of non-game fish species such as stickleback. In addition, Steelhead trout, one of the priority species, use one of the project-area urban creeks—Alhambra Creek, and fall-run chinook salmon migrate up a portion of Walnut Creek.

As noted by CALFED Bay-Delta Program technical teams, adverse water quality is a stressor affecting the priority species and habitats. Water quality stressors include increased contaminants and acute or chronic toxicity caused by urban runoff, wastewater treatment plants, and other sources.

This proposal addresses water quality contamination from pesticides because of data (summarized in the next section) that raised substantial concern about the presence and impacts of organophosphate pesticides in stormwater runoff and wastewater treatment plant effluent. The project's primary benefit is to reduce pesticide contaminants and improve water quality. The improved water quality will, in turn, benefit species dependent on the aquatic habitat. Sensitive species may benefit directly, such as certain arthropods for which the lethal dose of organophosphate pesticides is quite low. Since arthropods are an important food source for fish,

Figure 1.

Service Area Map



benefits to arthropods may secondarily benefit fish. Note also that fish bio-concentrate diazinon, such that concentrations in their tissues are up to 200 times higher than those in the water, and that fish are affected by sublethal diazinon doses. (Journal of Pesticide Reform, Fall, 1992.) In addition, some benefit to all aquatic species can be expected from reduced pesticide inputs due to the lessening of an environmental stressor.

As noted in the RFP, a variety of stressors affect the priority species and habitats. By addressing one of the stressors (water quality contamination), this project reinforces other restoration programs. In general, the more stressors are removed, the more readily natural processes can restore impaired ecological functions.

The proposal directly supports one of the non-ecosystem objectives of the CALFED Bay-Delta program--good water quality for all beneficial uses. Since the project does not involve acquisition or construction, it will not foreclose any habitat restoration options. It does not conflict with any of the CALFED Bay-Delta program objectives or alternatives.

The proposal may affect third parties who manufacture and/or supply pest-control products, since it promotes the use of less-toxic pest control methods and the avoidance of more-toxic pesticides. However, the project targets a limited geographical area, so the affect on large manufacturers should be negligible. The project may also decrease future disposal costs associated with unwanted pesticides and will help protect public health.

Background and Biological/Technical Justification

CCCSD determined through extensive research that organophosphate pesticides (notably diazinon and chlorpyrifos) in its treated wastewater were causing toxicity to the test organism, *Ceriodaphnia dubia* (water flea). *Ceriodaphnia dubia* is widely used as an indicator species for aquatic arthropods, an essential part of the aquatic food chain. Other research has shown that diazinon is found in urban creeks throughout the Bay area, and during storm events the concentrations are often high enough to be toxic to some species of aquatic life. (Draft Report by Scanlin and Gosselin, May 1997). Similarly, urban creek monitoring by the Central Valley Regional Water Quality Control Board found diazinon and chlorpyrifos levels that consistently exceeded Hazard Assessment criteria set by the Department of Fish and Game. Diazinon and chlorpyrifos are listed as constituents of concern by the CALFED Water Quality Group.

The Bay Area Urban Pesticide Committee was created to address the issues of pesticide toxicity in stormwater and in wastewater treatment plant effluent. It is comprised of CCCSD and other wastewater treatment plants, representatives from two Regional Water Quality Control Boards, city and county stormwater programs, Department of Pesticide Regulation, the U.S. EPA, county agricultural departments, pesticide manufacturers, and other interested individuals. The committee concluded that the environmental threat from pesticide use is significant enough to warrant a widespread public outreach program, and they drafted a pesticide education strategy.

This proposal seeks to implement some of those strategies within central Contra Costa County and would provide materials and expertise that others could use for broader implementation in the future. The project will improve water quality in local creeks and in Suisun Bay, the discharge point for CCCSD's treated wastewater and, along with local creeks, the receiving water for central Contra Costa County's stormwater runoff.

The proposal involves an educational/voluntary approach to pesticide management. Regulatory changes are difficult and time-consuming, whereas education can immediately address the threat. Also, education is consistent with the first approach to minimizing pesticide contamination, as outlined in the California Pesticide Management Plan.

The proposal focuses on residential pesticide users, because a detailed study by the California Department of Pesticide Regulation and CCCSD revealed that approximately 60% of the organophosphate pesticides reaching its sewer system came from residential areas. The education strategies in this proposal were selected from among other alternatives (such as other strategies listed by the Urban Pesticide Committee) because:

- They address barriers to using IPM. Depending on the wording of questions in surveys done by CCCSD and others, between 50 and 95 % of pesticide users are willing to switch to less toxic alternatives. The proposal will provide people with the information, products, and motivation needed to make that switch.
- They work through existing organizations (stores, Master Gardeners, store employees and existing public gardens, as a cost-effective and credible way to disseminate information.
- They maximize the use of experience and written materials from other projects, particularly the IPM pilot project now underway with stores and Master Gardeners.
- They are logically implemented at the local level (with regional sharing of experience and ideas) as opposed to a strategy such as T.V. advertising, which is best done regionally.

Public awareness about the problem of pesticides getting into the sewer and causing effluent toxicity was first raised through CCCSD's spring 1995 media campaign. This project provides the actual tools to solve the water quality problem. The IPM information will emphasize non-chemical control, rather than simply the avoidance of diazinon or other organophosphates. It appears diazinon and chlorpyrifos have been identified as the primary cause of toxicity because they are widely used; if other broad spectrum pesticides were widely used instead, they could prove equally harmful.

The benefits from the proposal are expected to be long-term, because the educational strategies are geared to making permanent change. The educational strategies are designed to shift the community norm and to create permanent resources for IPM information and support.

Many elements of the project (tasks 4 through 8) are new. Tasks 2 and 3 expand on a pilot-program that CCCSD is implementing through grants from the Department of Pesticide Regulation and the National Foundation for IPM Education (and with support from Palo Alto and CCCSD's own matching funds. That pilot project will be completed by May, 1998. The pilot project is about 25% complete, with about \$30,000 expended. The project team:

- Planned and held a trial garden health clinic to receive input on how best to train the Master Gardeners to lead such clinics.
- Prepared draft IPM fact sheets for controlling ants, aphids, fleas, and grubs (the species for which organophosphate pesticides are most commonly used).
- Developed conceptual slogans and themes for advertising participating stores.
- Found four store owners willing to participate.
- Coordinated with the Urban Pesticide Committee and kept interested agencies informed through meeting minutes.

Supporting documents, such as draft IPM fact sheets, are available from CCCSD.

Proposed Scope of Work

The project includes the following tasks:

Task 1: Manage the overall project. This includes the following:

- Oversee the project and coordinate with team members to ensure the project complies with the grant conditions and adheres to the schedule and budget.
- Coordinate with other agencies and organizations, including the Contra Costa Clean Water Program, Urban Pesticide Committee, the Bay Area Stormwater Management Agencies Association (BASMAA), and the Bay Area Pollution Prevention Group, to seek input, avoid overlap, and allow others to learn from the project.
- Maximize the project's benefits by promoting regional use of its components.
- Prepare quarterly reports for the granting agency, outlining progress and expenditures.
- Prepare a final report to be made available to other agencies and organizations, summarizing the project tasks and their effectiveness.

Task 2: Expand partnerships with stores/nurseries. Stores influence pesticide buying and use decisions through the products and information they carry, and the way their employees answer customer questions. This project expands a pilot project, now underway, to help make stores an IPM resource. This grant would increase the number of store partnerships by about 15 stores. Each store has individual constraints and needs that must be considered, but, in general, CCCSD would:

- Train store employees through workshops led by IPM experts (using a training curriculum being developed independent of this grant).
- Provide on-going training through the production and distribution of a video for store employees. The video will be made by taping/editing a store employee training workshop.
- Provide written IPM information and displays at participating stores with available space. Written materials are being produced independent of this grant, but additional copies will be printed and display materials purchased.
- Request that participating stores prominently display less-toxic products for controlling the target species.
- Encourage garden health clinics to be held in stores, led either by store employees or Master Gardeners.
- Feature the participating stores through periodic paid newspaper ads, as well as the CCCSD newsletter and other publicity opportunities. This will raise public awareness about IPM and provide an incentive for stores to participate.

Task 3: Expand the partnership with Master Gardeners. The University of California Cooperative Extension (UCCE) Master Gardener Program is a well established, active, volunteer organization which provides information to the general public about gardening and pest control. Under a separately-funded pilot program led by CCCSD, Master Gardeners are being given basic IPM training so that they can host garden health workshops for the general public. This grant would fund the following:

- Train additional Master Gardeners in IPM by offering the basic IPM training (led by IPM experts) once a year for the three years of the grant.
- Offer supplemental training to Master Gardeners once a year, to deepen their understanding of IPM. Additional written materials will be produced for use in the training.
- Provide on-going help to the trained Master Gardeners by making the project's IPM experts

available by phone and by having them attend and critique at least one Garden Health Clinic led by each Master Gardener.

- Support the IPM information role of Master Gardeners, by providing them with set-up and resource materials to be used at Garden Health Clinics and other events.
- Help organize and publicize the Garden Health Clinics.

Task 4: Publicize and distribute an IPM video as follows:

- Purchase 500 copies of an IPM video produced by San Luis Video.
- Distribute the copies to libraries and video stores within central Contra Costa County.
- Publicize the video, as is done for CCCSD's successful video on home composting.

Task 5: Publicize IPM strategies used by existing public gardens. Central Contra Costa County has several public gardens (such as at the John Muir Historical Site, Heather Farms, Crow Canyon Institute, and the Lindsay Wildlife Museum) which use IPM strategies. This task would:

- Evaluate the extent to which existing public gardens use IPM and offer additional IPM training to the garden staff.
- Publicize the IPM concepts incorporated in the public gardens, using existing publicity opportunities such as newsletters and the general media.
- Provide signage and/or a brochure at one or more of the gardens, showing how the garden incorporates IPM principles that can also be used by the public.
- Use the public gardens (assuming permission is granted) as sites for Garden Health Clinics for the general public. (Garden Health Clinics will be led by volunteer Master Gardeners given IPM training under this grant; see task 3.)

Task 6: Provide IPM Training to Pest Control Operators (PCOs)

PCOs are one of the major pesticide user groups and are potentially a resource for using IPM practices instead. Professional expertise in this area would be extremely useful for the public in the residential and commercial environment. Currently, there are very few professional practitioners of IPM in the region. This task would:

- Identify four PCOs which would be recruited county-wide.
- Have IPM experts conduct three IPM workshops for PCOs on cockroaches, ants and fleas.
- Provide follow-up in the field with the PCOs, with IPM experts advising.
- Prepare several fact sheets on the target pests and guidelines for setting up an IPM program.

Task 7: Change community norms through an "eco-friendly" yard campaign. Research shows that perceived community norms strongly influence individual behavior. This task seeks to make the avoidance of toxic pesticides a community norm. CCCSD will:

- Seek participants in an "eco-friendly" yard campaign through publicity in CCCSD's newsletter, participating stores, the general media, and other publicity sources such as mailings to garden clubs.
- Seek the participation of entire neighborhoods and condominium complexes through homeowner associations.
- Request that participants sign a pledge to avoid toxic pesticide use. (Research shows that written commitments help turn good intentions into action.)
- Provide participants with a bumper sticker, yard sign, or fence decal that says something like "My yard is eco-friendly: No toxic chemicals used."

Monitoring and Data Evaluation (Task 8)

CCCSD proposes the following monitoring/project evaluation steps as Task 8:

- Prepare quarterly reports to describe progress during the grant (Task 1).
- Track all aspects of the project that can be quantified, including the number of participating stores, the number of store employees trained, the number of Garden Health Clinic attendees, etc.
- Request feedback from participants (for example, through workshop evaluation forms).
- Collect pesticide sales information from participating stores.
- Measure public awareness through a follow-up survey to a 1994 baseline survey.
- Continue to periodically evaluate the toxicity of its effluent and the presence of diazinon and chlorpyrifos in its influent and effluent. The Contra Costa Clean Water Program will participate in a regional urban creek monitoring program.

Implementability

There are no obstacles to implementing the project:

- All pertinent laws and regulations will be complied with.
- No permits, easements, etc. are required. The project does not involve land acquisition, so issues of seller willingness, land use, and hazardous materials contamination do not apply.
- Coordination with the Urban Pesticide Committee and the Bay Area Pollution Prevention Group will readily occur, because CCCSD is a member of both. Similarly, coordination with the Contra Costa Clean Water Program will easily occur, since CCCSD implements a component of that program.
- Since the project is educational, it does not depend on climate or hydrological conditions.
- No opposition to the project is anticipated. A CCCSD survey showed that most respondents who used pesticides were willing to switch to less toxic alternatives, and therefore should be receptive to the project. Outreach efforts are an integral part of it.

Section IV: Costs and Implementation Schedule

Budget Costs

The project budget is \$457,000, of which \$266,000 is requested from CALFED. The remaining \$191,000 will be provided primarily by the applicant, CCCSD, with support from the cooperating agencies. A breakdown of costs by task and category is shown in the attached project cost breakdown. CCCSD will document all "in kind" cost sharing through our existing project cost control accounting system. Resources will be used efficiently using the appropriate level of staff support for each task, as an example. CCCSD is committed to its share of the project; funds and staff resources will be budgeted for the Source Control and Public Information Sections of CCCSD.

The project would occur at a greatly reduced level without grant funding due to CCCSD budget and staff constraints. CALFED was identified as an appropriate funding source due to the project's consistency with CALFED goals.

The project could be divided into phases if necessary, with tasks 2, 3, 4 comprising phase I, tasks 5 through 7 comprising phase II, and tasks 1 and 8 applying to both phases. Although the tasks are related, they could be independently implemented, so contingency funding is not necessary.

Cost-effectiveness was a criteria used to define the proposal. As previously indicated (see page 6) , this project builds on work being completed under other grants and with support from the City of Palo Alto and CCCSD's own funds and therefore leverages those resources. Project materials and a summary report will be made available to other agencies, including those involved in the Urban Pesticide Committee, the Bay Area Pollution Prevention Group, and the Bay Area Stormwater Management Agencies Association (BASMAA), so that those agencies may, in turn, leverage the work done under this grant.

The consultants identified as team members were selected because of their unique experience. BIRC, Baefsky & Associates, and Janet Cox and Associates are currently working with CCCSD on its pilot IPM partnership project working with stores and Master Gardeners. N. Alison Tucker of Tucker and Associates was added to the team (as a sub-consultant to Janet Cox) due to her extensive experience in public education related to pollution prevention and her central location within the project area .

Any subcontractors subsequently added to the project--such as printers--will be added based on competitive bids, or, if applicable, compliance with Government Code 4525 et seq.

Schedule/Milestones

The schedule and key milestones are shown on the attached figure.

Payment requests would be submitted quarterly to CALFED, along with a progress report. Payment would be requested only for completed work.

Third Party Impacts

Because the project seeks to change pesticide use, it may affect the manufacturers/suppliers of pest-control products.

**Central Contra Costa Sanitary District
IPM Partnership to Improve Water Quality in Suisun Bay and Local Creeks
Budget Costs**

Project Tasks	CCCSD			Service Contracts			Material	Misc	Total Cost	CCCSD Matching
	Direct Labor	Direct Salary & Benefits	Overhead Labor	Baefsky	BIRC	Cox				
Project Management	700 hours	\$42,000	\$7,000						\$49,000	\$49,000
Store Partnerships	500 hours	\$19,000	\$3,000	\$40,000	\$20,000	\$28,000	\$30,000 ¹	\$21,000 ²	\$161,000	\$52,000
Master Gardener Partnership	500 hours	\$19,000	\$3,000	\$35,000	\$35,000	\$14,000	\$10,000 ³	\$4,000 ⁴	\$120,000	\$47,000
IPM Public Video	100 hours	\$4,000	\$1,000					\$5,000 ⁵	\$10,000	\$7,000
Public Garden IPM	100 hours	\$4,000	\$1,000	\$12,000	\$4,000		\$4,000 ⁶		\$25,000	\$5,000
PCO Training	100 hours	\$4,000	\$1,000	\$3,000	\$30,000				\$38,000	\$5,000
Eco-Friendly Yard Campaign	300 hours	\$11,000	\$2,000		\$3,000		\$5,000 ⁷	\$18,000 ⁸	\$38,000	\$16,000
Evaluation	200 hours	\$8,000	\$2,000					\$10,000 ⁹	\$15,000	\$10,000
Total	2500 hours	\$111,000	\$20,000	\$90,000	\$92,000	\$42,000	\$49,000	\$58,000	\$457,000	\$191,000
Less CCCSD Matching									- \$191,000	
Total Grant Request									\$266,000	

- ¹ Point of sale store advertising for all stores
- ² IPM video training for store employees (20 minutes)
- ³ Materials and supplies for Garden Health Clinics
- ⁴ Printing 2,000 IPM Fact Sheet Booklets prepared during pilot project
- ⁵ Purchase 500 copies of existing video
- ⁶ Brochures and IPM signage
- ⁷ Yard signage and awards
- ⁸ Advertising for "Eco-Friendly" yard campaign
- ⁹ Follow-up survey

1-005176

1-005176

Central Contra Costa Sanitary District
 IPM Partnership to Improve Water Quality in Suisun Bay and Local Creeks
 Schedule and Milestones - 1997

1-005177

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
										← Project Start		
Task 1: Project Management												(sub-tasks are ongoing)
Task 2: Store Partnerships												(sub-tasks are ongoing)
Task 3: Master Gardener Partnerships												(sub-tasks are ongoing)
Task 4: IPM Public Video												(sub-tasks are ongoing)
Task 5: Public Garden IPM												(sub-tasks are ongoing)
Task 6: PCO Training												(sub-tasks are ongoing)
Task 7: Eco-Friendly Yard Campaign												(sub-tasks are ongoing)
Task 8: Evaluation												(sub-tasks are ongoing)
								7-day influent pesticide sampling				(sub-tasks are ongoing)

1-005177

Central Contra Costa Sanitary District
 IPM Partnership to Improve Water Quality in Suisun Bay and Local Creeks
 Schedule and Milestones - 1998

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Task 1: Project Management	*			*			*			*		
	Quarterly Report			Quarterly Report		shoot video	Quarterly Report			Quarterly Report		(sub-tasks are ongoing)
Task 2: Store Partnerships				*		*			*			
				finish recruiting stores		employee training workshop			finish employee video			(sub-tasks are ongoing)
Task 3: Master Gardener Partnerships			*			*						
			basic IPM workshop			advanced IPM workshop						(sub-tasks are ongoing)
Task 4: IPM Public Video			*									
			place video in libraries									(sub-tasks are ongoing)
Task 5: Public Garden IPM			*									
			evaluate public gardens		(sub-tasks are ongoing)							complete signage & brochure
Task 6: PCO Training						*			*			
						recruit 4 PCOs			start PCO training			(sub-tasks are ongoing)
Task 7: Eco-Friendly Yard Campaign										*		
				(sub-tasks are ongoing)						campaign development complete		
Task 8: Evaluation		*						*				
		7-day influent pesticide sampling						7-day influent pesticide sampling				(sub-tasks are ongoing)

1-005178

1-005178

**Central Contra Costa Sanitary District
 IPM Partnership to Improve Water Quality in Suisun Bay and Local Creeks
 Schedule and Milestones - 1999**

1-005179

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Task 1: Project Management	* Quarterly Report (Jan) * Quarterly Report (Apr) * Quarterly Report (Jul) * Quarterly Report (Oct) (sub-tasks are ongoing)											
Task 2: Store Partnerships	* employee training workshop (Apr) (sub-tasks are ongoing)											
Task 3: Master Gardener Partnerships	* basic IPM workshop (Mar) * advanced IPM workshop (Jun) (sub-tasks are ongoing)											
Task 4: IPM Public Video	(sub-tasks are ongoing)											
Task 5: Public Garden IPM	(sub-tasks are ongoing)											
Task 6: PCO Training	* complete PCO training (Mar) (sub-tasks are ongoing)											
Task 7: Eco-Friendly Yard Campaign	* initial recruitment (Feb) * publicize map (Jun) (sub-tasks are ongoing)											
Task 8: Evaluation	* 7-day influent pesticide sampling (Feb) * 7-day influent pesticide sampling (Aug) (sub-tasks are ongoing)											

1-005179

**Central Contra Costa Sanitary District
 IPM Partnership to Improve Water Quality in Suisun Bay and Local Creeks
 Schedule and Milestones - 2000**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Project End -->											
Task 1: Project Management	*			*			*		*			
	Quarterly Report			Quarterly Report	(sub-tasks are ongoing)		Quarterly Report		Final Report			
Task 2: Store Partnerships									(sub-tasks are ongoing)			
Task 3: Master Gardener Partnerships			*			*						
			basic IPM workshop			advanced IPM workshop			(sub-tasks are ongoing)			
Task 4: IPM Public Video									(sub-tasks are ongoing)			
Task 5: Public Garden IPM									(sub-tasks are ongoing)			
Task 6: PCO Training									(sub-tasks are ongoing)			
Task 7: Eco-Friendly Yard Campaign							*					
							publicize map		(sub-tasks are ongoing)			
Task 8: Evaluation		*					*	*				
		7-day influent pesticide sampling		(sub-tasks are ongoing)			follow-up survey		7-day influent pesticide sampling			

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Section V: Applicant Qualifications

CCCSD, the applicant and project lead, is a regional leader in pollution prevention, research, and public education and has an excellent track record in managing grants. Several CCCSD staff, technical consultants, and cooperating agencies will implement the project as follows.

Bart Brandenburg, CCCSD's Pollution Prevention Superintendent, will serve as the project manager. Mr. Brandenburg has been with CCCSD since 1986. He managed the Pretreatment Program when it received a national U.S. EPA Award for Outstanding Pretreatment Program. In addition, he:

- Took the lead in developing the District's Pollution Prevention Program
- Directed extensive research to identify sources of pesticides entering the sewer.
- Planned and helped implement CCCSD's Pesticide Awareness Campaign.
- Obtained and managed a grant to investigate the extent to which homeowners contribute metals to CCCSD's wastewater.
- Obtained and manages a grant to promote IPM through partnerships with stores and with Master Gardeners (the pilot project on which this grant proposal builds).

Mr. Brandenburg is active in professional and regional organizations and was named the Industrial and Hazardous Waste Person of the Year for the Bay Area in 1989 by the California Water Environment Association. Before joining CCCSD, he worked as an environmental engineer and a senior process engineer and received a Master of Science degree in Civil Engineering.

Earlene Millier, Source Control Coordinator with CCCSD, will serve as an assistant project manager. Ms. Millier has been with CCCSD since 1991 and:

- Assists on a variety of Pretreatment and Pollution Prevention programs and projects.
- Develops and implements activity tracking and reporting systems.
- Coordinates the annual CCCSD Pollution Prevention Awards.
- Serves as committee member for the Pesticide Education subcommittee of the Urban Pesticide Committee.

Tim Tullis, a Public Information Assistant with CCCSD, will serve as an assistant project manager and will help implement project publicity requirements (such as publicizing the eco-friendly yard campaign) and will serve as the project's media liaison. Mr. Tullis has been with CCCSD for 6 years and:

- Uses the media to increase public awareness of various CCCSD activities.
- Manages CCCSD's speaker bureau and all special events.
- Writes and provides photographs for district publications.
- Manages employee communications.
- Manages CCCSD's Web Task Force and has just finished creating the District's web site.
- Provides publicity for the grant-funded pilot program to promote IPM.

Before joining CCCSD, Mr. Tullis served as a public relations intern with the Contra Costa Water District, the Downtown Chico Business Association, and the Chico News and Review, and he received a Master of Public Administration degree.

CCCSD Clerical staff will provide administrative support to ensure a cost-effective use of staff resources on the project.

The project team includes IPM experts Michael Baefsky, principal of Baefsky & Associates and Tanya Drlik of the Bio-Integral Resource Center (BIRC). They will:

- Lead IPM training workshops for store employees and Master Gardeners.
- Be available for phone consultations to answer questions from trainees.
- Attend at least one Garden Health Clinic run by each Master Gardener.
- Provide technical content for IPM written materials produced under the grant.
- Evaluate the IPM strategies used by existing public gardens and provide training.
- Provide training for Pest Control Operators.

Michael Baefsky has provided professional landscape consulting services to a wide range of clients since 1985 and is also a state credentialed instructor of horticulture. He:

- Analyzes landscapes and advises clients on ecological plant health care.
- Holds workshops and classes and undertakes research related to IPM.
- Provides consulting services as a Certified Arborist, an IPM expert, an Agricultural Pest Control Advisor, and a soils specialist.
- Teaches courses on insects and soils at Merritt College and Diablo Valley College.
- Serves as an IPM expert in CCCSD's current grant-funded IPM project.

In addition to the credentials noted above, Mr. Baefsky has a Qualified Applicator License and is a Certified Crop Advisor. He is active in a number of professional organizations and is President of the Applied Insect Ecologists Foundations.

Tanya Drlik is an IPM specialist with the Bio-Integral Resource Center (BIRC), a highly-respected non-profit organization that specializes in disseminating information on least-toxic pest control and IPM. Ms. Drlik has an M.S. in ecosystem management and 23 years of experience in the field of IPM. For example, she:

- Taught undergraduate classes in IPM.
- Compiled, edited, and wrote two IPM Manuals.
- Worked with city park departments to implement IPM programs.
- Did educational outreach in IPM for schools and community groups.
- Responds to pest management questions from all over the U.S.
- Writes and edits articles for two IPM journals published by BIRC.
- Manages a USEPA-funded project to produce materials on weed management.
- Serves as an IPM expert for CCCSD's current IPM grant.

The team also includes public education consultants Janet Cox, Principal of Janet Cox and Associates, and her sub-consultant N. Alison Tucker of Tucker and Associates, who will:

- Provide advice on overall project structure and implementation.
- Help recruit participating stores.
- Prepare user-friendly written materials with input from the project's IPM experts.

Janet Cox has provided public education/public participation programs and support services to public agencies since 1989, specializing in water quality. For example, she:

- Was primarily responsible for the Palo Alto Regional Water Quality Control Plant's award winning public education programs.
- Worked since inception on the RWCQP's acclaimed Clean Bay Business Program.
- Produces a variety of products such as brochures, posters, point-of sale promotions, classroom materials, videos, and radio spots.

- Currently works on CCCSD's IPM Partnership pilot project and a statewide residential education program for the California Department of Pesticide Regulation.
- Ms. Cox also provides editorial and technical writing services to corporate clients. Before forming her current business, she served as Public Participation Coordinator for an EPA Facilities Planning Study and served as an Editor for several different publications.

N. Alison Tucker, has provided communication and environmental planning services since 1987 and has extensive experience in public education related to pollution prevention. For example, she:

- Helped develop and implement the City of Bellevue (Washington) Business Partners for Clean Water Program, an education program which received national attention.
 - Managed a \$2-million, grant-funded lake restoration project for the City of Bellevue, and designed and implemented the public education and outreach strategies.
 - Wrote newsletters on water pollution prevention for Seattle businesses.
 - Designed components of a watershed action plan for the City of Seattle.
 - Writes a variety of materials from press releases and interpretive signs to technical reports.
- Before creating her own business, Ms. Tucker worked as a community liaison with the Puget Sound Water Quality Authority and as an environmental planner for the City of Bellevue (WA).

Cooperating/Coordinating Agencies. The project will be implemented in cooperation with other agencies as follows:

- **The University of California Cooperative Extension Master Gardener Program** will provide staff for project design and implementation.
- **The Contra Costa Clean Water Program** will give input and help support various aspects of the program. It will participate in a regional urban creek monitoring program.
- Information will be shared and input sought from additional agencies through the **Urban Pesticide Committee**, the **Bay Area Stormwater Management Agencies Association**, and the **Bay Area Pollution Prevention Group**.

References:

- Linda Clark, Department of Pesticide Regulation (reference for the current grant-funded pilot IPM partnership project involving the same team as in this proposal).
- Val Conner, Central Valley Regional Water Quality Control Board (reference for Bart Brandenburg's work with the Urban Pesticide Committee and CCCSD's efforts with research on sources of pesticides).
- John Sanders, Department of Pesticide Regulation (reference for CCCSD's joint project with DPR to identify the source of pesticides entering the sewer system).

Additional references for CCCSD or other team members are available upon request.

Section VI: Compliance with Standard Terms and Conditions

A copy of the required Non-Discrimination Compliance Statement is attached.

CCCSD has reviewed the standard terms and conditions and finds them acceptable; we will be able to comply with them.

NONDISCRIMINATION COMPLIANCE STATEMENT

COMPANY NAME CENTRAL CONTRA COSTA SANITARY DISTRICT

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age, marital status, denial of family and medical care leave and denial of pregnancy disability leave.

CERTIFICATION

I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on this date and in the county below, is made under penalty of perjury under the laws of the State of California.

OFFICIAL'S NAME <i>Arthur P. Freitas</i>	
DATE EXECUTED 7/28/97	EXECUTED IN THE COUNTY OF CONTRA COSTA
PROSPECTIVE CONTRACTOR'S SIGNATURE <i>Barton L. Brandenburg</i>	
PROSPECTIVE CONTRACTOR'S TITLE POLLUTION PREVENTION SUPERINTENDENT	
PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME BARTON L. BRANDENBURG	